

REMARKS/ARGUMENTS

In the Office Action summary mailed March 10, 2006, the Examiner indicated claims 1-87 remain pending in the application. However, claim 7 was canceled in a preliminary amendment mailed February 11, 2004. Accordingly, claims 1-6 and 8-87 were presented for examination and were rejected. Applicants are hereby amending claims 1, 6, 10, 11, 16, 52, 62, 64, 66, 68-74, 82 and 85; and canceling claims 2, 5, 8, 9, 54 and 77. Support for all claim amendments is found in the application as originally filed. Reconsideration of this application as amended, and allowance of all claims remaining herein, claims 1, 3-4, 6, 10-53, 55-76 and 78-87 as amended, are hereby respectfully requested.

EXAMINER'S REJECTION OF CLAIMS 1-6, 8-16, 18, 21-38, AND 44-87 UNDER 35 U.S.C. 103(a)

In section 5 of the Office Action, the Examiner rejected claims 1-6, 8-16, 18, 21-38, and 44-87 under 35 U.S.C. § 103(a) as being obvious in view of U.S. Patent No. 6,073,142 to Geiger et al. (hereinafter, "Geiger") and U.S. Patent No. 6,771,765 to Crowther et al. (hereinafter, "Crowther"). Of these claims, claims 1, 6, 12-16, 21, 27 30, 47, 52, 55 62, 78, 82 and 85 are independent claims.

Claim 1 is hereby being amended to include a limitation formerly included in claim 2. Accordingly, claim 2 is hereby being canceled. As amended, claim 1 recites "identifying a priority level corresponding to the message by reading the priority level from a header of the message; [and] identifying a processing rule for the identified priority level." For example, the priority level corresponding with the message is included in the message. Specifically, the priority level of the message is indicated in a header of the message. Based on the priority level indicated in the header of the message, a processing rule is identified and utilized to deliver the message.

Independent claim 1 is not obvious in view of Geiger and Crowther because neither Geiger nor Crowther discloses or suggests "identifying a priority level corresponding to the message by reading the priority level from a header of the message; [and] identifying a processing rule for the identified priority level."

The Examiner has indicated that the above limitations are disclosed in Geiger at lines 44-62 of column 10, which state in part:

If there are multiple actions, the distribution engine 230 selects a highest priority action, and applies it to the message.

According to Geiger, actions (or processing rules) are assigned priorities. For example, when multiple business rules are to be applied to a single message, the order in which the rules are applied is determined by the priority level assigned to the rule. Geiger, however, does not disclose or suggest identifying a priority level associated with a message by reading the priority level from a header of the message.

Furthermore, according to Geiger, the business rules that are applied to a particular message are established by an administrator. (See Geiger, Col.12, Lines 53-66). Then, a rule engine applies the entire list of rules to a particular message, generating an action list including actions that are to be taken by a distribution engine. (See Geiger, Col. 17, lines 34-43). Therefore, the particular actions that are undertaken with respect to a message are determined by applying multiple business rules to the message, as defined according to an administrator. Geiger does not disclose or suggest "identifying a processing rule for the identified priority level," as is recited in claim 1.

The system described by Crowther, on the other hand, receives messages and then assigns the messages to a particular queue. Each position within the queue may be associated with a priority level. For example, according to Crowther:

In one embodiment, each skillset includes two queues, namely, an idle agent queue 210 and a pending

requests queue 215. Within the idle agent queue 210 are priority levels P1 to PA, and within the pending requests queue 215 are priority levels P1 to PB (where "A" and "B" are positive whole numbers, and where "A" and "B" may be different). In the embodiments described herein, priority level P1 is defined as the highest priority level, though in other embodiments, priority levels may be defined differently. **The idle agent queue 210 lists the agents that are idle and the priority level assigned to the agents. The priority levels are pre-defined and stored in the configuration database 140. The priority level might define the training level of the agent in the particular skillset, or any other criteria that the supervisors/managers determine for their call center.** The pending requests queue 215 contains the pending requests (e.g. voice calls, e-mails, web forms, etc.) at particular priority levels that are waiting to be answered by agents.

...

A second e-mail request 414 is received and placed at P3 in the sales e-mail skillset as shown by arrow 416. The **assignment of the priority level** (in this case P3) for a media request is controlled by the media gateways (e.g., media gateway 112). For example, an e-mail request from a registered customer may be assigned a higher priority level than an e-mail request from an unregistered user. The media gateway 112 specifies to the MQM, by messaging, which skillset(s) to place the e-mail request (see FIG. 5, message at reference 3). The media gateway may optionally queue the request to multiple skillsets. It is also up to the media gateway to know the skillsets that are set up for e-mail, whether the skillsets are for sales or service, etc. (Crowther, Col. 4, Lines 47-64 and Col. 9, Lines 15-28; emphasis added).

According to Crowther, messages are assigned to a position within a queue. The particular position within the queue represents an agent with an assigned priority level. Therefore, the message is assigned a priority level, only inasmuch as it is assigned to an agent, or a position within a queue, after the message has been received. In contrast to claim 1, Crowther does not disclose or suggest "identifying a priority level

corresponding to the message by reading the priority level from a header of the message.”

Furthermore, according to Crowther, the particular position within the queue to which a message is assigned may depend upon whether the message is received from a registered, or unregistered, user of the system. (See Crowther, Col. 9, Lines 15-28). However, Crowther does not disclose or suggest “identifying a processing rule for the identified priority level,” as is recited in claim 1.

Independent claim 6 as amended includes a limitation that is similar to the above limitation of claim 1. Specifically, claim 6 recites, “identifying a priority level corresponding to the message by reading the priority level from a header of the message.”

Dependent claims 2-5 and 8-10 depend from independent claim 1. Accordingly, the patentability of these dependent claims flows from the patentability of independent claim 1.

For at least the reasons stated above, the claim set including claims 1, 3-4 and 8-11, as well as independent claim 6 as amended, are not obvious in view of the hypothetical combination of Geiger and Crowther. Accordingly, the Examiner is respectfully requested to withdraw the rejection of claims 1, 3-4 and 8-11; and to allow the claims as amended.

Independent claims 12, 13, 14 and 15 are patentably distinct over the hypothetical combination of Geiger and Crowther as claims 12, 13, 14 and 15 recite “identifying a plurality of network communications ... each having a respective priority level.” As indicated above with respect to claim 1, neither Geiger nor Crowther discloses or suggests receiving network communications (e.g., messages) which have priority levels. In the system of Geiger, priority levels attach to the business processing

rules, such that, if a message is to be processed by more than one rule, the message is processed first with the rule having the highest priority. In the system of Crowther, priority levels attach to the individual positions within a queue, such that, when a message is received, it may be assigned to an agent by assigning it to a position within the queue, thereby indirectly assigning a priority level to the message. However, Crowther does not disclose or suggest that a message has a priority level, as received.

For at least the reasons stated above, independent claims 12, 13, 14 and 15 are not obvious in view of the hypothetical combination of Geiger and Crowther. Accordingly, the Examiner is respectfully requested to withdraw the rejection of claims 12, 13, 14 and 15; and to allow the claims.

Independent claim 16 is hereby being amended to improve clarity. As amended, claim 16 is patentably distinct over the hypothetical combination of Geiger and Crowther, as claim 16 recites "sampling network communications received from a certain sender to determine a level of network communications having a certain characteristic; determining a priority level as a function of the level; and assigning the priority level to subsequent network communications received from the certain sender."

Whereas claims 1, 3-4, 6, 8-15 are directed to methods wherein the message itself has or indicates a priority level, claim 16 is directed to a method wherein a priority level is determined by analyzing multiple messages from a particular sender. To further clarify, lines 16-21 on page 12 of Applicants' specification state:

For example, messages delivered from a certain sender along a certain network path may be sampled to determine levels of messages containing viruses, to determine whether the messages are undeliverable (which is often the case when a dictionary attack spam method is used), or whether the messages are spam, e.g. as determined by pattern matching or other known techniques for detecting abusive messages.

By way of example, a low priority level may be assigned to messages received from a particular source, if previous messages received from that source consistently exhibited certain non-desirable characteristics.

According to Geiger, one or more business rules are applied to an individual message. In applying the multiple business rules to the individual message, the system of Geiger may analyze the individual message to determine certain actions to take, based on attributes of the individual message. However, the system of Geiger does not sample messages (plural) from a particular sender in order to determine a level (e.g., a measure of the number) of messages having a certain attribute, and then use the level to assign a priority level to subsequent messages from that same sender. Stated differently, Geiger does not disclose or suggest "sampling network communications received from a certain sender to determine a level of network communications having a certain characteristic; determining a priority level as a function of the level; and assigning the priority level to subsequent network communications received from the certain sender," as is recited in claim 16.

The Examiner has suggested that the above limitations are disclosed in Geiger at column 19, lines 52-67; column 20, lines 1-20; and column 23, lines 5-36. It is not readily apparent which particular portions of the passages the Examiner is relying on in support of the rejection. In any case, after carefully reviewing the particular passages of Geiger that have been cited by the Examiner, Applicants submit the cited passages do not disclose or suggest the limitations recited in claim 16.

Furthermore, Crowther does not disclose or suggest the above limitations of claim 16. According to Crowther, incoming messages are assigned to a queue, for example, based on whether the message is from a registered or unregistered user. (See Crowther, Col. 9, Lines 15-28). The system of Crowther does not sample messages from a particular sender to determine a level (e.g., measure or number) of messages having a particular characteristic, for the purpose of establishing a priority

level used to deliver a subsequent message. Stated differently, Crowther does not disclose or suggest “sampling network communications received from a certain sender to determine a level of network communications having a certain characteristic; determining a priority level as a function of the level; and assigning the priority level to **subsequent** network communications received from the certain sender,” as is recited in claim 16.

Dependent claim 18 depends from independent claim 16. Accordingly, the patentability of dependent claim 18 flows from the patentability of independent claim 16.

For at least the reasons provided above, claims 16 and 18 are not obvious in view of the hypothetical combination of Geiger and Crowther. Accordingly, the Examiner is respectfully requested to withdraw the rejection of claims 16 and 18; and to allow the claims.

Each of independent claims 21, 27, 30, 52, 55, 62, 78, 82 and 85 includes at least one limitation related to a method or mechanism for allocating network connections. For instance, independent claim 21 recites, “means for **allocating network connections** for delivery of network communications, said means being configured to provide a prioritization effect whereby connections are allocated for delivery of said plurality of network communications in an order corresponding to respective priorities of said plurality of network communications, a network communication having a relatively high priority being allocated a network connection before another network communication having a relatively low priority.” Similarly, claim 27 recites “a device capable of **allocating network connections** for delivery of network communications ...” Claim 30 recites, “a connection processor for **allocating network connections** for delivery of network communications ...” Independent claim 62 is hereby being amended to include a limitation from claim 77 (now canceled). As amended, claim 62 recites, “delaying delivery of the network communication to the

intended recipient according to the prescribed delay, wherein delaying delivery of the network communication comprises **controlling allocation of network connections** for delivery of network communications to cause other network communications having priority levels higher than the network communication to be delivered before delivery of the network communication.” Independent claims 52, 55, 78, 82 and 85 include similar limitations. Accordingly, each of independent claims 21, 27, 30, 52, 55, 62, 78, 82 and 85 refers to a method or mechanism for managing bandwidth by intelligently allocating network connections, based in part on priority levels associated with network communications (e.g., messages).

To further clarify, lines 9-17 on page 3 of Applicants’ specification state:

The present invention allows recipients, ISPs, ESPs, and other network communication (message) recipients to control how their network's or systems resources, such as network connectivity bandwidth, are used and/or allocated for use to distribute messages from others. The present invention also allows for preferential prioritized treatment of compliant messages sent from trusted senders, and lower priority treatment of non-compliant messages from non-compliant and/or irresponsible senders. The present invention further provides for lessening or avoiding the impact of virus, spam, and denial of service attacks, and the ability to load balance incoming messages onto a cluster of servers. (Emphasis added).

Neither Geiger nor Crowther discloses or suggests the concept of allocating network connections, based in part, on priority levels associated with network communications. At best, Geiger discloses a system for delivering, or gating, messages based on business rules. Geiger does not disclose or suggest any mechanism for controlling the establishment of actual network connections, based on the priority level assigned to a message. Crowther generally refers to methods for intelligently queuing messages to be handled by agents. However, Crowther does not disclose or suggest a

mechanism for controlling the establishment of actual network connections, based on the priority level assigned to a message.

The Examiner has suggested that the above-quoted limitations are disclosed in particular passages of Geiger and Crowther (e.g., Geiger, column 19, lines 52-67 and column 20, lines 1-58; Crowther, column 9, lines 15-27 and column 8, lines 1-50). Again, it is not readily apparent which particular portions of the passages the Examiner is relying on in support of the rejection. In any case, after carefully reviewing the particular passages of Geiger and Crowther that have been cited by the Examiner, Applicants submit the cited passages do not disclose or suggest the limitations quoted above from claims 21, 27, 30 and 62, and similar limitations found in claims 52, 55, 78, 82 and 85.

Dependent claims 22-26, 28-29, 31-38, 44-46, 53, 56-61, 63-77, 79-81, 83-84 and 86-87 depend directly or indirectly from one of independent claims 21, 27, 30, 52, 55, 62, 78, 82 and 85. Accordingly, the patentability of these dependent claims flows from the patentability of independent claims 21, 27, 30, 52, 55, 62, 78, 82 and 85.

For at least the reasons above, claims 21-38, 44-46, 52-53, and 55-97 are not obvious in view of the hypothetical combination of Geiger and Crowther. Accordingly, the Examiner is respectfully requested to withdraw the rejection of claims 21-38, 44-46, 52-53 and 55-87; and to allow the claims.

Independent claim 47 is patentably distinct over the hypothetical combination of Geiger and Crowther, as claim 47 recites "tracking a number of inbound connections for each of a plurality of communications hosts; and altering a connection build process for a certain of said plurality of communications hosts to control a flow of said certain host's network communications." Similar to claims 21, 27, 30, 52, 55, 78, 82 and 85 discussed above, claim 47 generally relates to a method for distributing communications

(messages) that facilitates the improved management of bandwidth. To clarify, lines 12-22 on page 20 of Applicants' specification state:

The upstream message will be passed back along the e-mail delivery network path until it reaches the sender or until it reaches a poorly-behaved email host. Email hosts ignoring priority, volume and squelch messages are considered poorly behaved because they do not respect the capacity of downstream server.

If such a request is ignored by a poorly-behaved email host (as evidenced by no change in e-mail traffic volume), the inventive system initiates a Spam Squelch by limiting the number and volume of connections, minimally at a network level, from the offending host. For example, the network appliance tracks volume/number of inbound connections per host, and slow and/or stop the TCP and/or SMTP connection build process for squelched hosts. Additionally, when a source path is identified, e.g. for spam, it may be traced to an ISP of the spam sender. (Emphasis added).

Neither Geiger nor Crowther discloses or suggests the limitations of claim 47. Again, the Examiner has referenced particular passages in Geiger and Crowther in support of the rejection of claim 47. However, after reviewing the passages referenced by the Examiner in his rejection of claim 47, it is unclear which portions of the passage the Examiner is relying on in support of the rejection. Applicants submit that neither Geiger nor Crowther discloses or suggests the limitations of claim 47 as set out above.

Dependent claims 48-51 depend from independent claim 47. Accordingly, the patentability of these dependent claims flows from the patentability of independent claim 47.

For at least the reasons above, claims 47-51 are not obvious in view of the hypothetical combination of Geiger and Crowther. Accordingly, the Examiner is respectfully requested to withdraw the rejection of claims 47-51; and to allow the claims.

EXAMINER'S REJECTION OF CLAIMS 17, 19, 20 AND 39-43 UNDER 35 U.S.C. § 103(A)

It appears that the Examiner has mistakenly numbered two sections of the Office Action as "Section 5." In any case, in the second section referenced as Section 5 of the Office Action, the Examiner has rejected dependent claims 17, 19, 20 and 39-43 under 35 U.S.C. § 103(a) as being obvious in view of the combination of Geiger, Crowther and U.S. Patent No. 6,654,787 to Aronson et al. (hereinafter, "Aronson").

As dependent claims 17, 19, 20 and 39-43 are dependent upon independent claims 16 and 30, the patentability of these dependent claims flows from the patentability of independent claims 16 and 30. The Examiner has not cited Aronson to show the features recited in the independent claims that Geiger and Crowther lack, but instead to show additional, dependently claimed features. Thus, Applicants submit that dependent claims 17, 19, 20 and 39-43 are allowable over a hypothetical combination of Geiger, Crowther and Aronson for at least the same reasons that their parent claims are allowable over Geiger and Crowther. The Examiner is respectfully requested to withdraw the rejection of dependent claims 17, 19, 20 and 39-43; and to allow the claims.

Applicants believe that this application is now in condition for allowance of all claims remaining herein, claims 1, 3-4, 6, 10-53, 55-76 and 78-87, and therefore an early Notice of Allowance is respectfully requested. If the Examiner disagrees or believes that, for any other reason, direct contact with Applicants' attorney would help advance the prosecution of this case to finality, the Examiner is invited to telephone the undersigned at the number given below.

The Commissioner is hereby authorized to credit overpayments or to charge any deficiency in a required fee to Deposit Account No. 19-3140. A duplicate copy of this sheet is enclosed. **A duplicate copy of this Notice is enclosed for this purpose.**

Respectfully submitted,

A handwritten signature in cursive script, reading "Nathan Elder", written over a horizontal line.

Nathan Elder
Attorney under Rule 34
Reg. No. 55,150

SONNENSCHN NATH & ROSENTHAL LLP
P. O. Box 061080
Wacker Drive Station, Sears Tower
Chicago, Illinois 60606-1080
(415) 882-5067

cc: SYMPOL
IP/T docket CH
Ed Radlo